

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0010] of the published application US2002/0160688A1 corresponding to p. 2, ll. 28-29 of the original specification with the following amended paragraph:

[0010] FIGURES 7A- ~~7C~~ 7D are schematic diagrams of the electronic circuitry in the universal chassis in which

Please replace paragraph [0011] of the published application US2002/0160688A1 corresponding to p. 2, l. 29 of the original specification with the following amended paragraph:

[0011] FIG. 7A and 7B shows the IR receiver circuitry and

Please replace paragraph [0012] of the published application US2002/0160688A1 corresponding to p. 2, l. 30 and p. 3, ll. 1-2 of the original specification with the following amended paragraph:

[0011] FIGs. ~~7B and 7C~~ and 7D shows the H bridge motor control circuitry for the chassis motors in which FIG. ~~7B~~ 7C controls the left-hand motor and FIG. ~~7C~~ 7D controls the right-hand motor.

Please replace paragraph [0013] of the published application US2002/0160688A1 corresponding to p. 3, ll. 5-14 of the original specification with the following amended paragraph:

[0013] With reference to FIG. 1, the universal chassis 10 for the preferred embodiments is provided as an IR controlled vehicle chassis which facilitates multiple functionality including the provision of a dual motor, dual speed, remote control vehicles 1 that accommodate

multiple modular wheel 12, weapon 14 and body 16 assemblies which may be received on the universal chassis 10 of FIG. 1. As described, the chassis 10 is further equipped with on-board electronics 22 for receiving encoded IR signals for controlling the speed of the left-hand 18 and right-hand 20 motors respectively, and microprocessor control is provided for counting the number of physical impacts as identified with an impact switch 24 or tilt sensor.

Please replace paragraph [0014] of the published application US2002/0160688A1 corresponding to p. 3, ll. 15-24 of the original specification with the following amended paragraph:

[0014] IR Battlebots 1 are described as a variety of dual motor, dual speed, remote controlled vehicles having a universal chassis 10 with the means for accepting modular wheel 112, weapon 114 and body 116 assemblies and where the chassis 10 is also equipped with the on board electronics 22 for receiving an IR signal, for controlling the speed of the motors, and for counting the number of physical impacts received. The controller 100 has the means of transmitting via IR any one of 17 codes required for the operation of the vehicles 1. These functions are forward and reverse for both motors 18, 20 and "turbo" forward and reverse for both motors 18, 20. There is also a code for when the vehicle is idle. The IR itself is broadcast at one specific carrier frequency.

Please replace paragraph [0015] of the published application US2002/0160688A1 corresponding to p. 3, ll. 25-28 of the original specification with the following amended paragraph:

[0015] Both the chassis 10 and the controller 100 may be outfitted with a switch 50 for changing the specific IR carrier broadcast frequency. The number possible switch positions is determined by the number of Battlebots 1 (chassis) required to battle simultaneously.

Please replace paragraph [0016] of the published application US2002/0160688A1 corresponding to p. 4, ll. 1-3 of the original specification with the following amended paragraph:

[0016] Alternatively, each Battlebot 1 (chassis) may be tuned to a single specific IR carrier frequency. In this event, two of the same style Battlebots (chassis) will not be able to operate simultaneously.

Please replace paragraph [0017] of the published application US2002/0160688A1 corresponding to p. 4, ll. 4-6 of the original specification with the following amended paragraph:

[0017] To clarify further, any chassis 10 may become any Battlebot 1 because of the modular nature of its construction. The modularity is purposely built in to allow users to modify their Battlebot chassis 10.

Please replace paragraph [0018] of the published application US2002/0160688A1 corresponding to p. 4, ll. 7-18 of the original specification with the following amended paragraph:

[0018] A hand-held controller 100 (not shown) is facilitated with the ability to transmit via IR signals nine codes which facilitate 17 operations of the motor as illustrated Appendix A-1 through A-8. The decoding of the 17 encoded operations for the motor drive combinations of the vehicles facilitates the functions of forward, reverse, and turbo drive commands for either or both motors including turbo forward and reverse for both motors. A code is also provided for indicating when the vehicle is in an idle state when the user has not manipulated the controls of the hand-held controller such that the vehicle motor may be provided in an OFF

state. Additionally, the IR carrier frequency is broadcast by individual controllers at separate carrier frequencies allowing for the control and operation of multiple vehicles simultaneously by different users.

Please replace paragraph [0019] of the published application US2002/0160688A1 corresponding to p. 4, ll. 19-25 of the original specification with the following amended paragraph:

[0019] To this end, the controller 100 and the chassis 10 may be outfitted with a switch 50, e.g., rotatable, momentary or dip switches, for changing the specific IR broadcast frequencies. The number of possible switch positions or frequency configurations may be determined by the number of vehicles required to battle or otherwise operate simultaneously. Alternatively, each chassis may be tuned to a single specific IR carrier frequency, in which two of the same style chassis 10 may not be able to operate simultaneously.

Please replace paragraph [0020] of the published application US2002/0160688A1 corresponding to p. 4, l. 26, through p. 5, l. 12 of the original specification with the following amended paragraph:

[0020] The configured vehicles are intended for operation at relatively close range with directional infrared IR controllers 100 such that multiple players may engage in a battle or collision activity between multiple vehicles. The operation may be provided either on a tabletop or on a flat floor surface for providing a platform for engaging the play pattern as between the players and their controlled vehicles. It is likely that the players will be operating the vehicles within close range, e.g., 3 to 10 feet, preferably at a range of about six feet. As shown in FIG. 1, the universal chassis includes electronic circuitry 22 on a circuit board 26 including an IR receiver 27, impact switch 24, an LED indicator 28 and reset button 30

operable with batteries housed within the chassis. Each of two motors (left 18 and right 20) have a combination gear 34 which operates the driver train 36 and weapon subassemblies 14. As discussed, the assemblies of FIGS. 2A, 3A, 4A, and 5A facilitate operation from either of the two motors 18, 20 that will activate the weapon subassemblies 14 such that slider gears 40 in FIGS. 2J, 3J, 4J, and 5J may individually operate the mechanical subassemblies attached to the universal chassis 10.

Please replace paragraph [0021] of the published application US2002/0160688A1 corresponding to p. 5, ll. 13-23 of the original specification with the following amended paragraph:

[0021] As discussed, the universal chassis 10 accepts modular components and includes four bosses 44 to accept any of the four bodies 16, or body styles of FIGS. 2G, 3G, 4G, and 5G, identified by name by Minion 70, Blendo 72, Killerhurtz 74, and Vlad 76, body styles, respectively. The reversible motors 18, 20 are provided with two speeds either for pulsed operation from the information processor facilitated with a microprocessor 25 or microcontroller, which controls the speed by providing a pulsed or alternatively a full power ("turbo") operation. In addition to providing for slower pulsed operation, the pulsed operation of the motor also serves to extend the battery life of the vehicle, and the slow pulsed operation is also a provided mode of operation for steering or otherwise maneuvering the vehicles.

Please replace paragraph [0022] of the published application US2002/0160688A1 corresponding to p. 5, l. 24, through p. 6, l. 4 of the original specification with the following amended paragraph:

[0022] The IR controller 100 is operated on one of multiple carrier frequencies, at least three and preferably four to eight frequencies for allowing simultaneous operation, e.g., eight vehicles over eight carrier frequencies, which are controlled with a frequency configuration switch or input provided by the user. The infrared (IR) transmission link is somewhat directional with the remote hand-held controllers providing an angle of illumination of about 40 degrees allowing for multiple players in indoor closer range operation. The transmit and receive circuitries are described further below in connection with FIGS. 6 and 7A and 7B which are provided with a conventional Winbond W583 encoding circuit which transmits signals over a carrier frequency generated with a 555 timer.

Please replace paragraph [0023] of the published application US2002/0160688A1 corresponding to p. 6, ll. 5-9 of the original specification with the following amended paragraph:

[0023] The mechanical subassemblies are illustrated in exploded views for each of the four embodiments, as shown in FIGS. 2J, 3J, 4J, and 5J, respectively, providing a saw operation 52, a rotary dome with serrated teeth 54, a hatchet 56, and forklift 58 type assemblies, however, various other active assemblies may be operable from the universal chassis 10.

Please replace paragraph [0024] of the published application US2002/0160688A1 corresponding to p. 6, ll. 11-21 of the original specification with the following amended paragraph:

[0024] Turning now to FIG. 6, the Winbond W583 encoder circuit which is used both in the transmitter circuit of FIG. 6 and receiver circuit of FIG. 7A and 7B, provides for modulation as indicated in the hardware IR of Appendix A-1, which is facilitated with the software control IR transmitter program of Appendix A-2 through A-5 and the IR receiver program of

A-6 through A-8. As shown in FIG. 6, the IR output of the W583 integrated circuit is coupled via a transmitter to the 555 timer, which outputs a modulated carrier frequency from a IR LED under the control of a switching transistor. Codes indicated in accordance with Appendix A-1 are thus transmitted from the transmitter circuitry of FIG. 6. The typical operation for the 555 timer provides a carrier output of approximately 38 kilohertz which may be varied for operation on multiple different carriers.

Please replace paragraph [0025] of the published application US2002/0160688A1 corresponding to p. 6, l. 22 through p. 7 l. 2 of the original specification with the following amended paragraph:

[0025] With reference to FIG. 7A and 7B, the IR receiver includes a photo diode with a tuner adjustment stage (optional) followed by a two-stage operational amplifier for amplifying the detected IR signal which is presented to a phase-lock loop (PLL) tone decoder herein LM567 decoder which generates an output to the Winbond W583 integrated circuit for controlling the OR GATE operation of the H bridge motor circuitry of FIGS. ~~7B- 7C~~ and ~~7C 7D~~, which are provided as conventional motor drive circuits. It will be appreciated that the 555 timer of the FIG. 7A and 7B receiver provides gated operation such that the turbo decode output resets the 555 timer so as to provide full power operation to the motors via the control circuitry of FIGS. ~~7B- 7C~~ and ~~7C 7D~~.

AMENDMENTS TO THE DRAWINGS

Certain drawings were objectionable under 37 C.F.R § 1.83(a) in that the drawings must show every feature of the invention specified in the claims. In response to the Examiner's objections, the applicants submit herewith amended drawings showing the previously proposed drawing corrections including reference numerals corresponding to the previously amended specification and removing the numerous legends. FIG. 7A has been divided into FIG. 7A and FIG. 7B to comply with the drawing requirement for text size. Consequently, FIGs. 7B and 7C have been re-labeled as 7C and 7D respectively and corresponding amendments to the specification have been effected in keeping with this new figure numbering. No new matter is introduced by way of these amendments to the drawings.